DESIGN

TRUSCON STEEL WINDOWS

Types and Sizes for

ARCHITECTURAL PROJECTED
COMMERCIAL PROJECTED
PIVOTED AND SECURITY

MECHANICAL OPERATORS | **INDUSTRIAL DOORS**

RETURN TO DESIGN DIV.

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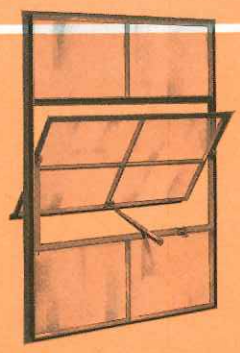
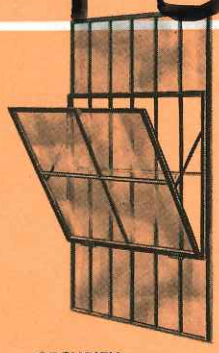
REVISED EDITION
FEBRUARY, 1948

FOLDER NO.
A-614

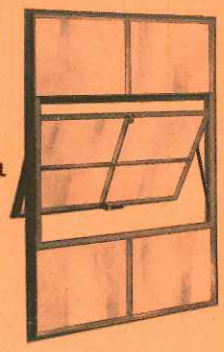
P.3



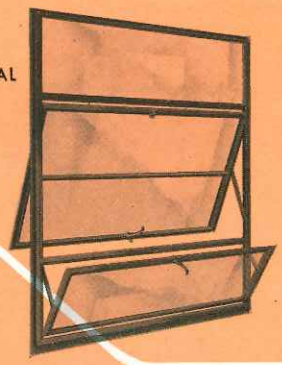
PIVOTED WINDOW



SECURITY WINDOW



COMMERCIAL PROJECTED WINDOW



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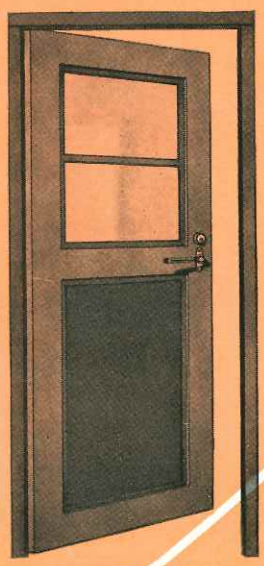


INDUSTRIAL DOOR

DISTRICT SALES OFFICES

A[illegible], N. Y., 75 State Street
ATLANTA 3, GA., 610 Rhodes-Haverty Building
BALTIMORE 11, MD., 330 W. 24th Street
BIRMINGHAM 3, ALA., 229-230 American Life Bldg.
BOSTON 27 (South), MASS., 307 Dorchester Ave.
BUFFALO 3, N. Y., 1426 Rand Building
CHARLESTON, W. VA., 612 Atlas Building
CHATTANOOGA 1, TENN., 19th and Grove Sts.
CHICAGO 6, ILL., 201 No. Wells Street
CINCINNATI 2, OHIO, 330 Dixie Terminal Bldg.
CLEVELAND 15, OHIO, 735 Hanna Bldg. Annex
COLUMBUS 15, OHIO, 818-821 Atlas Building
DALLAS 1, TEXAS, 314 Construction Building
DAYTON 2, OHIO, 44 So. Ludlow Street
DENVER 2, COLO., 228 Patterson Building
DETROIT 26, MICH., 615 Wayne Street
ERIE, PA., 215 Hayes Building
GREENSBORO, N. C., 935 Jefferson Standard Bldg.
HARRISBURG, PA., 410 N. Second Street
HOUSTON 11, TEXAS, 501 N. Greenwood Street
INDIANAPOLIS 3, IND., 398 Division Street
JACKSONVILLE 2, FLA., 301 Hildebrandt Bldg.
KANSAS CITY 6, MO., 1012 Baltimore Ave.
LITTLE ROCK, ARK., 812-13 Union Life Building
LOS ANGELES 54, CALIF., P. O. Box 3699, Terminal Annex Station
LOUISVILLE 1, KY., 1032 So. 8th St.
MEMPHIS 5, TENN., 269 Walnut Street
MINNEAPOLIS 2, MINN., 246 Baker Building
NEW ORLEANS 12, LA., 1143 Canal Bank Bldg.
NEW YORK 17, N. Y., 155 E. 44th Street
NORFOLK 10, VA., 518 Dickson Building
OKLAHOMA CITY 2, OKLA., 610½ Colcord Drive
OMAHA 2, NEB., 806-07 Insurance Building
PHILADELPHIA 3, PA., 1616 Walnut Street
PHOENIX, ARIZ., 303 Luhrs Building
PITTSBURGH 22, PA., 2541 Oliver Building
PORTLAND 12, ORE., 2139 N. Kerby Avenue
POTTSVILLE, PA., 1541 Howard Avenue
RICHMOND, VA., 122 N. 8th Street
ST. LOUIS 3, MO., 8th Floor, Shell Building
SALT LAKE CITY 10, UTAH, 1526 So. W. Temple St.
SAN FRANCISCO 5, CALIF., 604 Mission Street
SEATTLE 4, WASH., 757 Central Building
SYRACUSE 2, N. Y., 303 Syracuse-Kemper Insurance Building
TOLEDO 4, OHIO, 220 Richardson Building
WASHINGTON 5, D. C., 700 Investment Building
YOUNGSTOWN 1, OHIO, 1315 Albert Street

Export Department

Chrysler Bldg., 405 Lexington Ave., New York 17, N. Y.

Pressed Steel Division

6100 Truscon Avenue, Cleveland 4, Ohio

Factories

YOUNGSTOWN, OHIO - CLEVELAND, OHIO
CANTON, OHIO - GADSDEN, ALA.
WALKERVILLE, ONT., CANADA

WAREHOUSES

BALTIMORE, MD.
BOSTON, MASS.
BUFFALO, N. Y.
CHATTANOOGA, TENN.
CHICAGO, ILL.
CINCINNATI, OHIO
CLEVELAND, OHIO
DETROIT, MICH.
DENVER, COLO.
GADSDEN, ALA.
HARRISON, N. J.
HOUSTON, TEXAS
INDIANAPOLIS, IND.
JACKSONVILLE, FLA.
KANSAS CITY, MO.
LONG ISLAND CITY, N. Y.
LOS ANGELES, CALIF.
PHILADELPHIA, PA.
PITTSBURGH, PA.
PORTLAND, ORE.
ST. LOUIS, MO.
SAN FRANCISCO, CALIF.
YOUNGSTOWN, OHIO

RETURN TO DESIGN DIV.

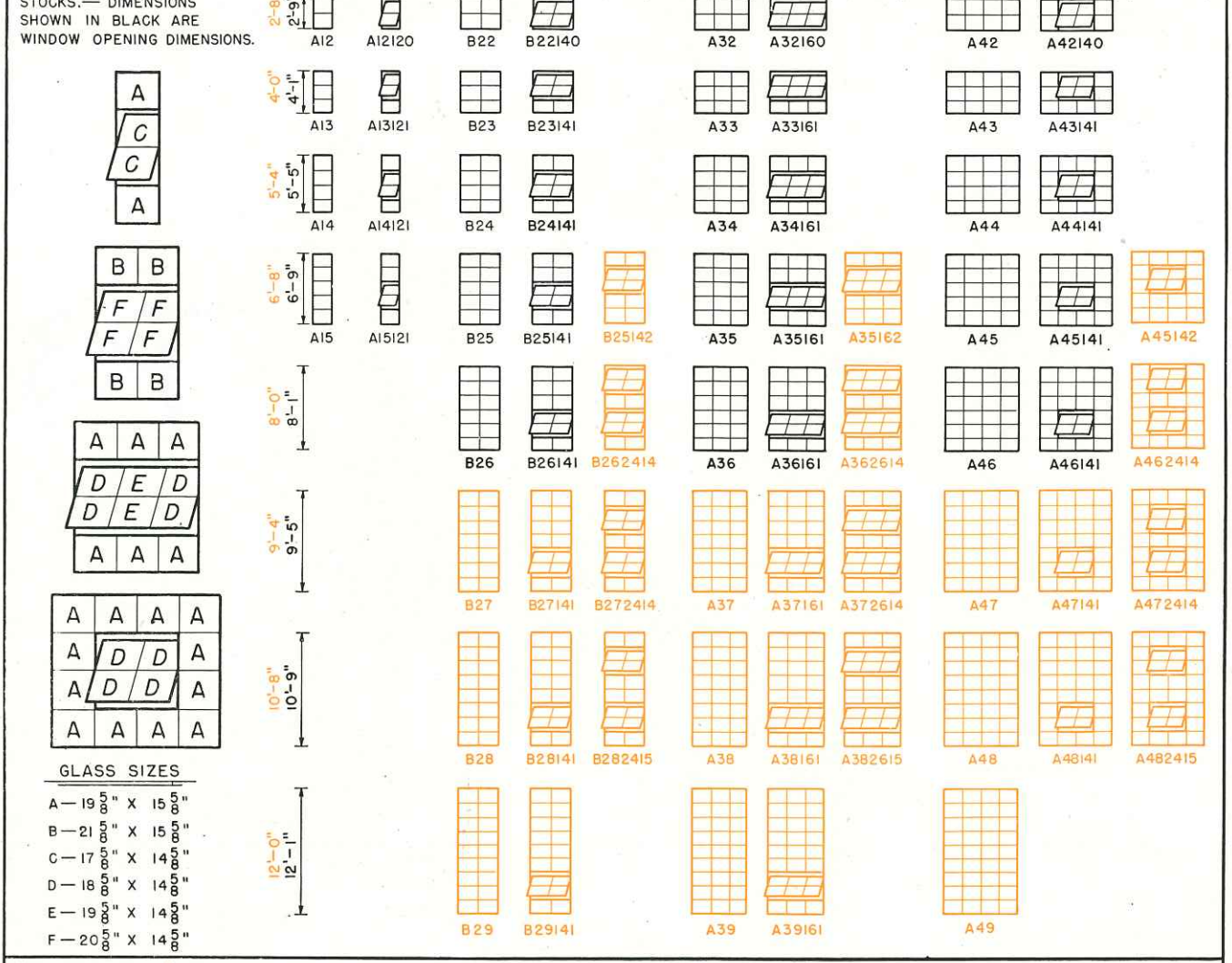
TRUSCON STEEL COMPANY, YOUNGSTOWN 1, OHIO

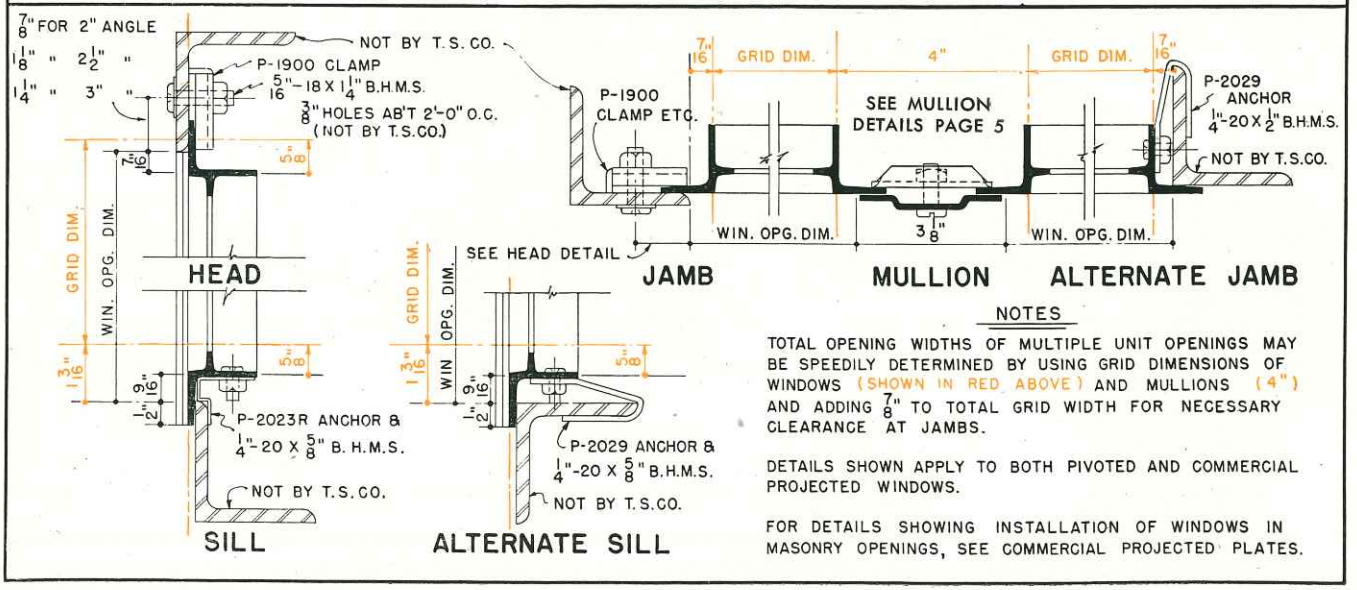
Subsidiary of Republic Steel Corporation

TRUSCON PIVOTED WINDOWS

TYPES AND SIZES

Grid lines and grid dimension points are indicated in red for the convenience of designers using the modular system.





NOTES

TOTAL OPENING WIDTHS OF MULTIPLE UNIT OPENINGS MAY BE SPEEDILY DETERMINED BY USING GRID DIMENSIONS OF WINDOWS (SHOWN IN RED ABOVE) AND MULLIONS (4") AND ADDING 7/8" TO TOTAL GRID WIDTH FOR NECESSARY CLEARANCE AT JAMBS.

DETAILS SHOWN APPLY TO BOTH PIVOTED AND COMMERCIAL PROJECTED WINDOWS.

FOR DETAILS SHOWING INSTALLATION OF WINDOWS IN MASONRY OPENINGS, SEE COMMERCIAL PROJECTED PLATES.

Gray, Des. Div.
5/17/49 - Gift

TRUSCON COMMERCIAL PROJECTED WINDOWS

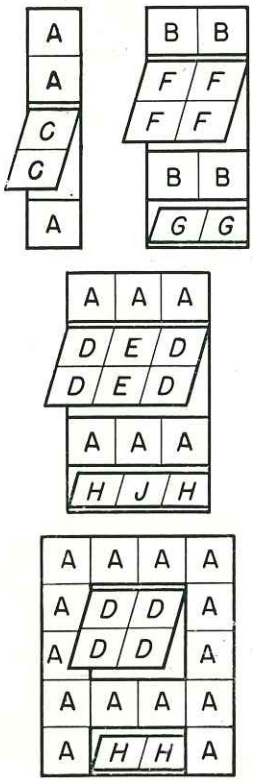
TYPES AND SIZES

Grid lines and grid dimension points are indicated in red for the convenience of designers using the modular system.

NOTES

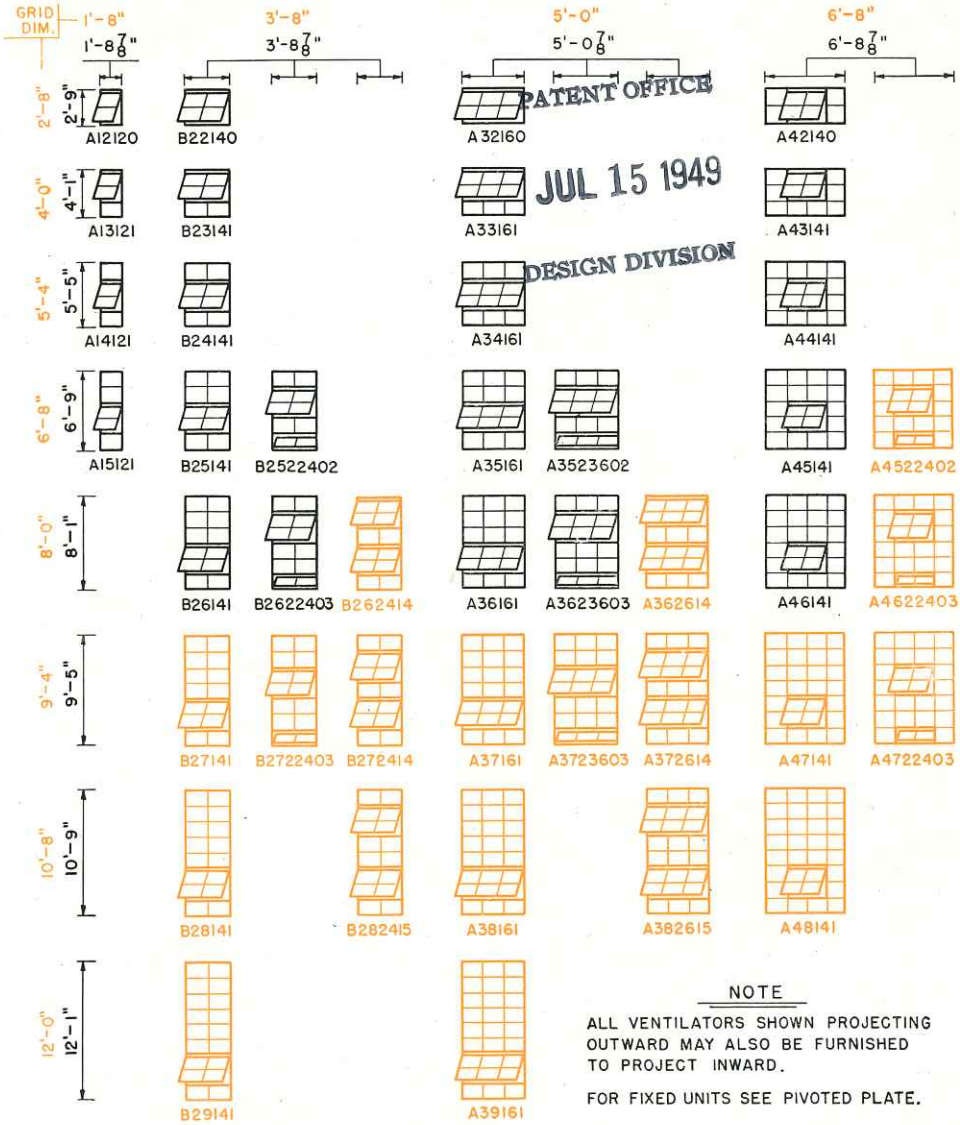
UNITS PRINTED IN BLACK ARE CARRIED IN WAREHOUSE STOCKS.

DIMENSIONS SHOWN IN BLACK ARE WINDOW OPENING DIMENSIONS.



GLASS SIZES

A-19 5/8" X 15 5/8"	F-20 5/8" X 14 5/8"
B-21 5/8" X 15 5/8"	G-20 5/8" X 13 5/8"
C-17 5/8" X 14 5/8"	H-18 5/8" X 13 5/8"
D-18 5/8" X 14 5/8"	J-19 5/8" X 13 5/8"
E-19 5/8" X 14 5/8"	



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DESIGN DIVISION

NOTE

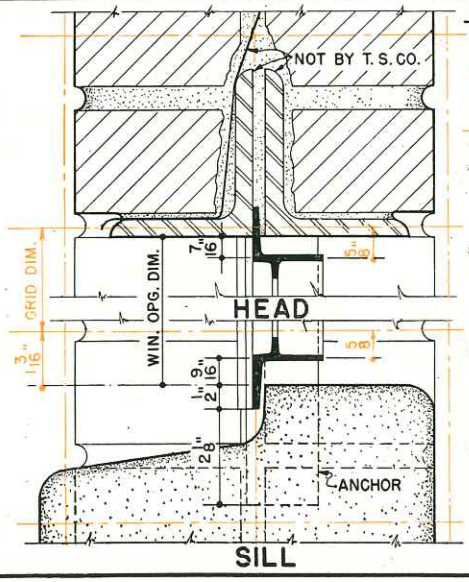
ALL VENTILATORS SHOWN PROJECTING OUTWARD MAY ALSO BE FURNISHED TO PROJECT INWARD.

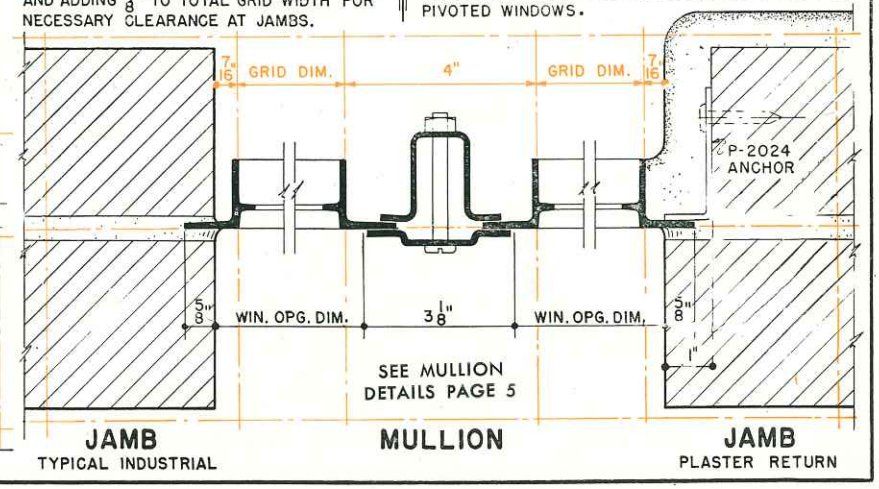
FOR FIXED UNITS SEE PIVOTED PLATE.

NOTE — TOTAL OPENING WIDTHS OF MULTIPLE UNIT OPENINGS MAY BE SPEEDILY DETERMINED BY USING GRID DIMENSIONS OF WINDOWS (SHOWN IN RED ABOVE) AND MULLIONS (4") AND ADDING 7/8" TO TOTAL GRID WIDTH FOR NECESSARY CLEARANCE AT JAMBS.

NOTE — DETAILS SHOWN APPLY TO BOTH PIVOTED AND COMMERCIAL PROJECTED WINDOWS.

NOTE — FOR DETAILS SHOWING INSTALLATION OF WINDOWS IN STEEL CONSTRUCTION, SEE PLATE ON PIVOTED WINDOWS.



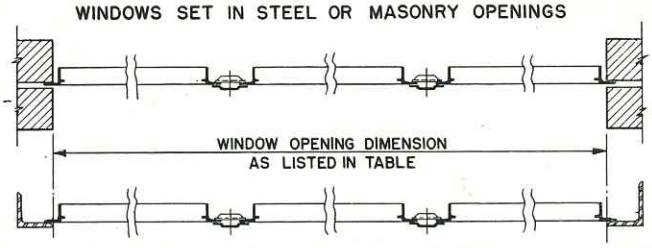


TRUSCON PIVOTED AND COMMERCIAL PROJECTED WINDOWS

MULTIPLE UNIT OPENINGS

OPENING DIMENSIONS FOR SINGLE AND MULTIPLE UNIT WINDOWS

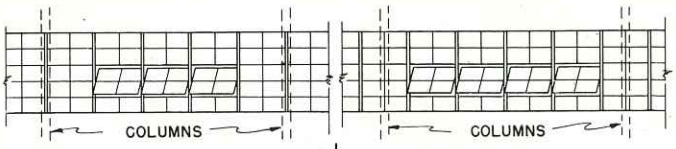
WINDOWS SET IN STEEL OR MASONRY OPENINGS



WINDOW OPENING DIMENSION	QUANTITY AND WIDTHS OF WINDOWS USED IN OPENINGS LISTED				MULLIONS REQUIRED
	1'-8 7/8" 1 LIGHT	3'-8 7/8" 2 LIGHTS	5'-0 7/8" 3 LIGHTS	6'-8 7/8" 4 LIGHTS	3 1/8" MULL. DIM.
1'-8 7/8"	1	---	---	---	---
3'-8 7/8"	---	1	---	---	---
5'-0 7/8"	---	---	1	---	---
6'-8 7/8"	---	---	---	1	---
7'-8 7/8"	---	2	---	---	1
9'-8 7/8"	- 1	2	---	---	2
10'-4 7/8"	---	---	2	---	1
11'-8 7/8"	---	3	---	---	2
13'-0 7/8"	---	2	1	---	2
13'-8 7/8"	---	---	---	2	1
14'-4 7/8"	---	1	2	---	2
14'-8 7/8"	---	2	---	1	2
15'-8 7/8"	---	---	3	---	2
15'-8 7/8"	---	4	---	---	3
17'-4 7/8"	---	---	2	1	2
17'-8 7/8"	---	1	---	2	2
18'-4 7/8"	---	2	2	---	3
19'-0 7/8"	---	---	1	2	2
19'-8 7/8"	---	5	---	---	4
20'-8 7/8"	---	---	---	3	2
21'-0 7/8"	---	---	4	---	3
21'-8 7/8"	---	2	---	2	3
22'-4 7/8"	---	3	2	---	4
23'-8 7/8"	---	6	---	---	5
23'-8 7/8"	---	2	3	---	4
24'-4 7/8"	---	---	2	2	3
25'-0 7/8"	---	1	4	---	4
25'-8 7/8"	---	3	---	2	4
26'-4 7/8"	---	---	5	---	4

NOTE:- FOR GRID DIMENSION DEDUCT 7/8" FROM WINDOW OPENING DIMENSION

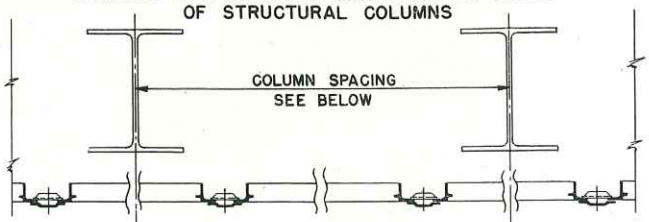
OPENING HEIGHT DIMENSIONS			
2 LIGHTS	2'-9"	6 LIGHTS	8'-1"
3 LIGHTS	4'-1"	7 LIGHTS	9'-5"
4 LIGHTS	5'-5"	8 LIGHTS	10'-9"
5 LIGHTS	6'-9"	9 LIGHTS	12'-1"

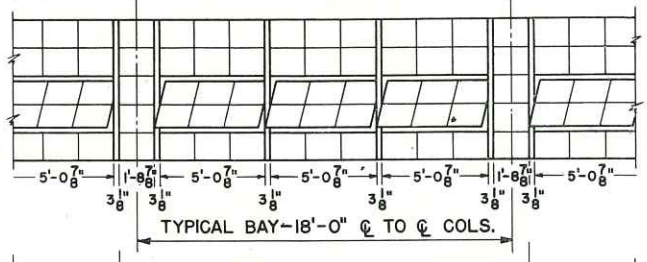


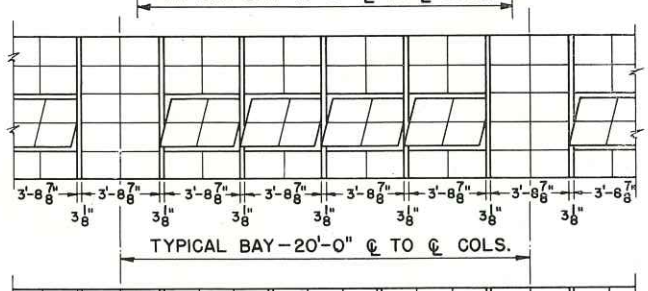
TWO FIXED UNITS, WITH RESULTING DECREASE IN VENTILATING AREA, MUST BE USED PER BAY WHERE MULLIONS ARE CENTERED ON COLS.

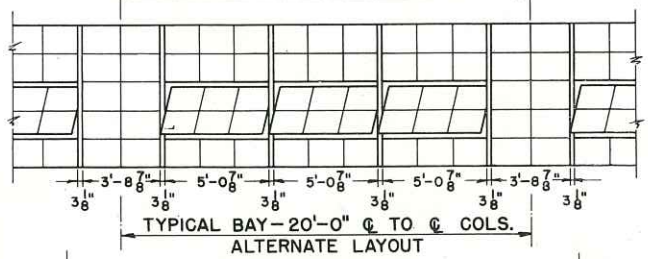
ONE FIXED UNIT ONLY MUST BE USED PER BAY WHERE FIXED UNITS ARE CENTERED ON COLUMNS.

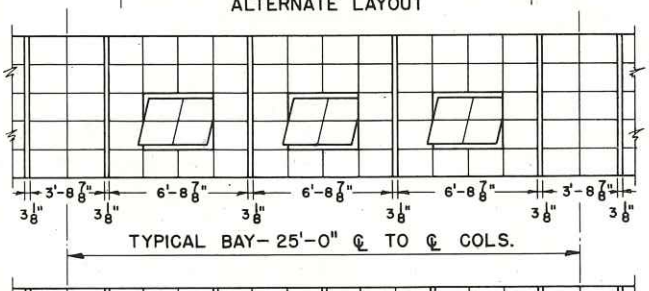
WINDOWS IN CONTINUOUS BANDS SET IN FRONT OF STRUCTURAL COLUMNS

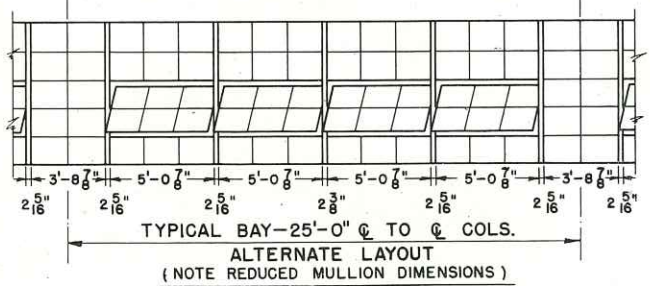












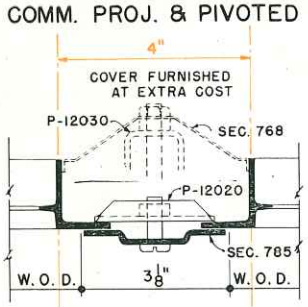
NOTE

TO OBTAIN MAXIMUM VENTILATING AREA, FIXED UNITS ARE SHOWN CENTERED ON COLUMNS IN TYPICAL BAYS ABOVE. IF MULLIONS ARE CENTERED ON COLUMNS, THEN ONE UNIT NOW VENTILATED MUST BE CHANGED TO FIXED TYPE AS OTHERWISE VENTILATOR WOULD FOUL ON COLUMN. SEE SKETCHES AT LEFT.

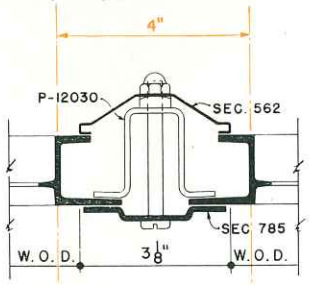
MULLIONS FOR TRUSCON PIVOTED, COMMERCIAL PROJECTED, SECURITY AND ARCHITECTURAL PROJECTED WINDOWS

MODULAR MULLIONS

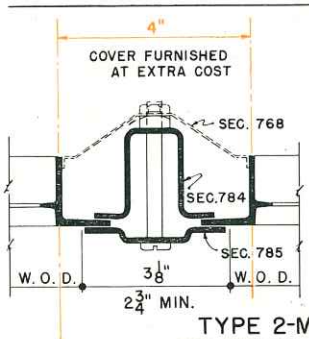
COMM. PROJ. & PIVOTED

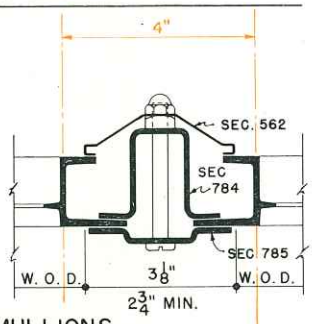


ARCHITECTURAL PROJ.



TYPE 1-M MULLIONS
FOR WINDOWS UP TO AND INCLUDING 6'-9" HIGH



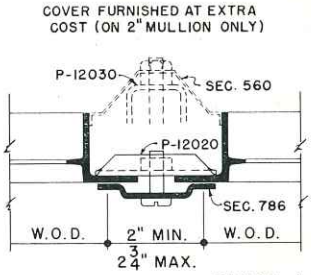


TYPE 2-M MULLIONS
FOR WINDOWS OVER 6'-9" HIGH

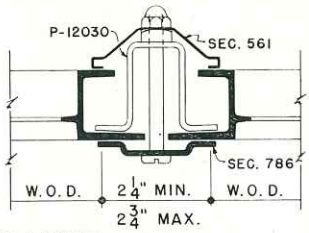
TABLES OF OPENING WIDTHS AND CONTINUOUS BAND WINDOWS, (EXCEPT ONE 25'-0" BAY) SHOWN ON OPPOSITE PAGE, ARE BASED UPON THE USE OF TYPES 1-M AND 2-M MULLIONS. THE 4" GRID DIMENSION FOR MULLIONS RESULTS IN MODULAR SIZES FOR ALL MULTIPLE UNIT OPENINGS. — THE 3 1/8" DIMENSION MAY BE VARIED SLIGHTLY TO COMPENSATE FOR NORMAL BUILDING TOLERANCES.

SPECIAL MULLIONS

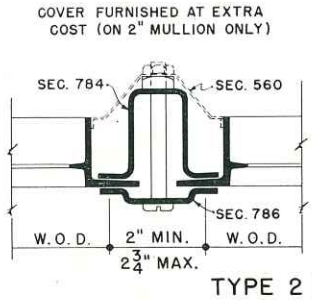
COMM. PROJ. & PIVOTED

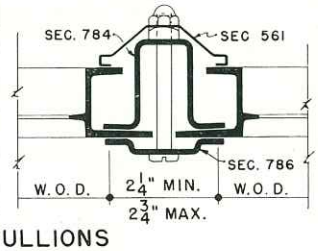


ARCHITECTURAL PROJ.



TYPE 1 MULLIONS
FOR WINDOWS UP TO AND INCLUDING 6'-9" HIGH





TYPE 2 MULLIONS
FOR WINDOWS OVER 6'-9" HIGH

MULLION TYPES 1 AND 2 ARE AVAILABLE FROM FACTORY ON SPECIAL ORDER ONLY. — THEY ARE SUITABLE FOR USE WITH PRE-WAR 14" X 20" OR 12" X 18" WINDOW UNITS BUT IN ADDITION, MAY BE USED WITH THE NEW MODULAR SIZES WHEN NECESSARY TO REDUCE STANDARD WIDTHS OF MULTIPLE UNIT OPENINGS.

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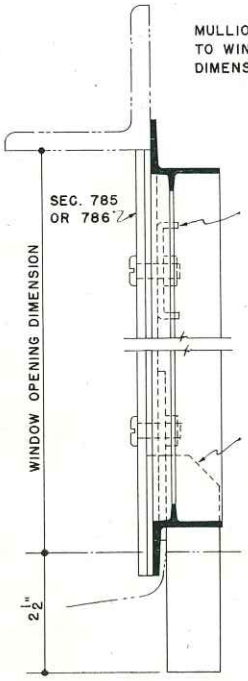
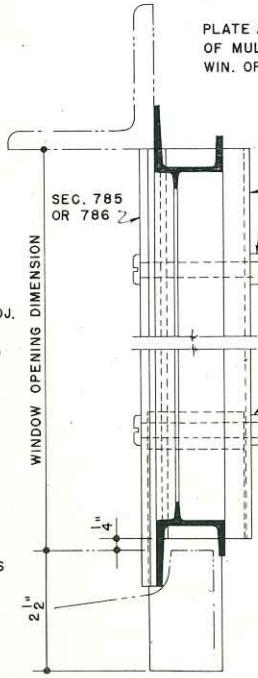
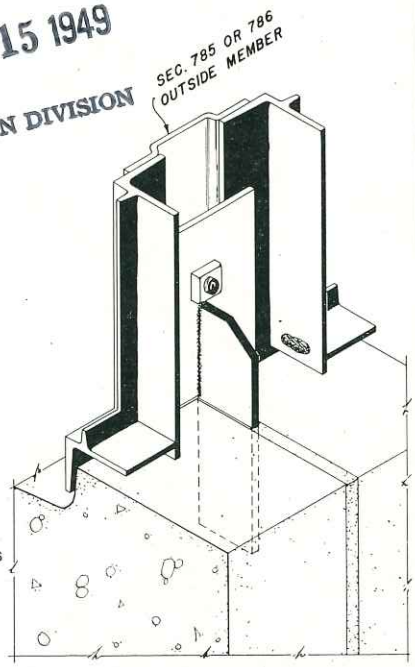


TYPES 1 & 1-M MULLIONS
SHOWING SILL ANCHORAGE



TYPES 2 & 2-M MULLIONS
SHOWING SILL ANCHORAGE



P-12021 ANCHOR
AS APPLIED TO MULLION & MASONRY

TRUSCON ARCHITECTURAL PROJECTED WINDOWS

TYPES AND SIZES

Grid lines and grid dimension points are indicated in red for the convenience of designers using the modular system.

NOTES

DIMENSIONS SHOWN IN BLACK ARE WINDOW OPENING DIMENSIONS.

ALL WINDOWS ARE SHOWN AS VIEWED FROM OUTSIDE. FIXED UNITS IN ALL SIZES SHOWN ARE AVAILABLE ON FACTORY ORDER.

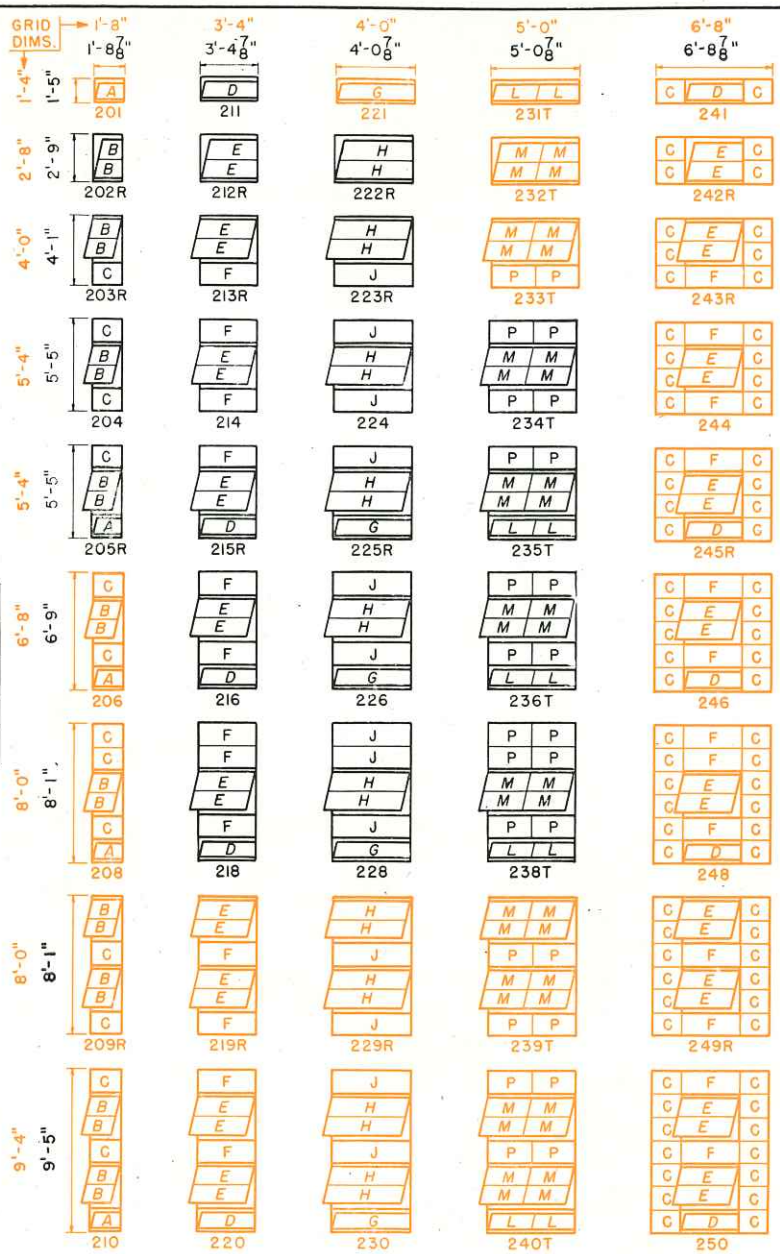
WAREHOUSE TYPES INCLUDE ONLY UNITS PRINTED IN BLACK WITH VENTILATOR SWING EXACTLY AS SHOWN, AND EQUIPPED WITH HARDWARE CONSISTING OF CAM-ACTING LOCKING HANDLES FOR OPEN-OUT VENTS AND EITHER CAM-ACTING LOCKING HANDLES OR SPRING LATCHES FOR OPEN-IN VENTS. THESE UNITS ARE PREPARED FOR INTERIOR WICKET SCREENS ON OPEN-OUT VENTS, AND EXTERIOR FIXED SCREENS ON OPEN-IN VENTS.

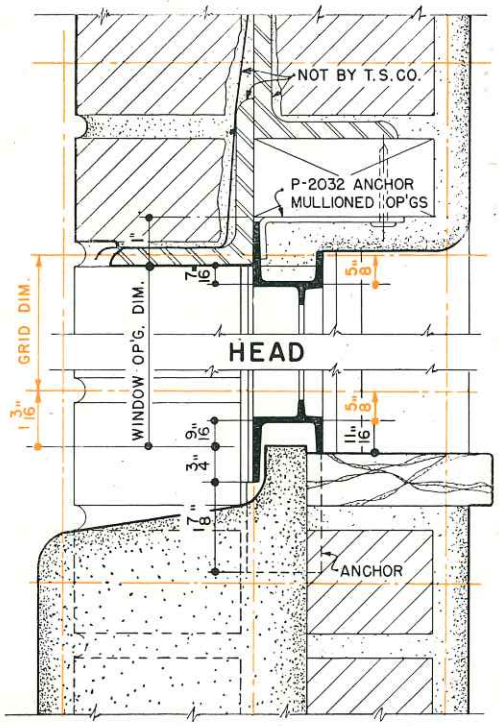
FACTORY SHIPMENT TYPES INCLUDE ALL WINDOWS SHOWN ON THIS PAGE. THEY MAY BE ORDERED TO HAVE THE SAME SCREENS AND HARDWARE AS WAREHOUSE TYPES, OR OPEN-OUT VENTS MAY BE ORDERED EITHER FOR EQUIPMENT WITH WICKET SCREENS AND SPRING LATCHES, OR WITH FIXED INTERIOR SCREENS AND PUSH BARS. WINDOWS MAY BE CONSTRUCTED TO HAVE VENTS PROJECTING INWARD, PROVIDING ALL VENTS IN SAME UNIT PROJECT INWARD.

TABLE OF GLASS SIZES					
A	$17\frac{5}{8}$" X $13\frac{5}{8}$"	E	$37\frac{5}{8}$" X $14\frac{5}{8}$"	J	$47\frac{5}{8}$" X $15\frac{5}{8}$"
B	$17\frac{5}{8}$" X $14\frac{5}{8}$"	F	$39\frac{5}{8}$" X $15\frac{5}{8}$"	L	$28\frac{5}{8}$" X $13\frac{5}{8}$"
C	$19\frac{5}{8}$" X $15\frac{5}{8}$"	G	$45\frac{5}{8}$" X $13\frac{5}{8}$"	M	$28\frac{5}{8}$" X $14\frac{5}{8}$"
D	$37\frac{5}{8}$" X $13\frac{5}{8}$"	H	$45\frac{5}{8}$" X $14\frac{5}{8}$"	P	$29\frac{5}{8}$" X $15\frac{5}{8}$"

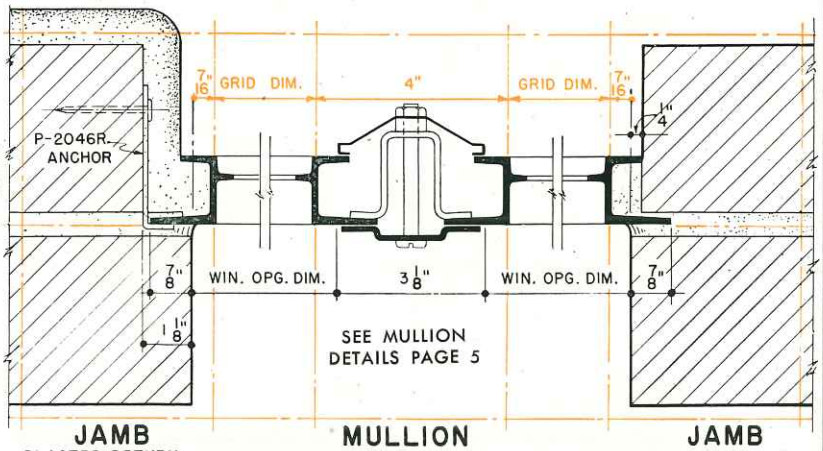
NOTE

TOTAL OPENING WIDTHS OF MULTIPLE UNIT OPENINGS MAY BE SPEEDILY DETERMINED BY USING GRID DIMENSIONS OF WINDOWS (SHOWN IN RED AT RIGHT) AND MULLIONS (4") AND ADDING $\frac{7}{8}$" TO TOTAL GRID WIDTH FOR NECESSARY CLEARANCE AT JAMBS.





SILL
MASONRY DETAILS BASED ON 3C=8"



JAMB
PLASTER RETURN

MULLION
SHOWING COVER

JAMB
WITHOUT PLASTER

TRUSCON SECURITY WINDOWS

Truscon Security Windows are standardized detention windows, built of heavy industrial window sections. Their weight and strength are adequate to effectively resist unauthorized entry to store buildings, warehouses, and commercial and industrial buildings. Glazing is from the interior side with wire clips and putty as standard.

Glazing of the main frame is omitted where vents occur and glass is set in the vent instead. Vents are bottom hinged to swing in. Opening is limited to 35° by friction side arms.

Screens may be conveniently installed into a recess provided for them between ventilator and main frame.

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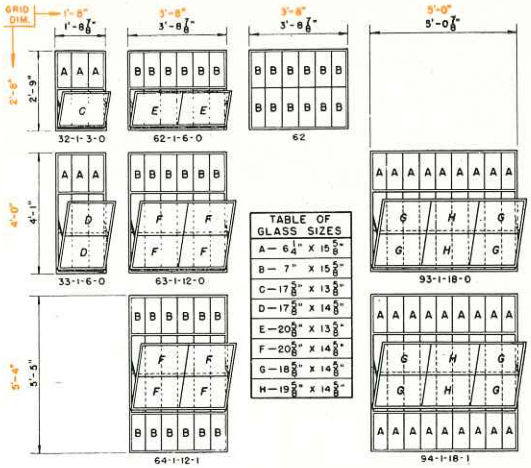
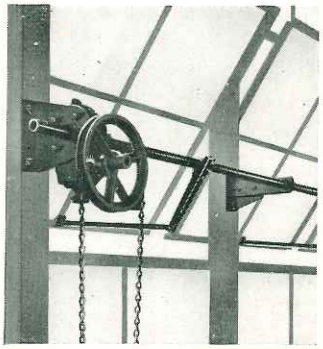


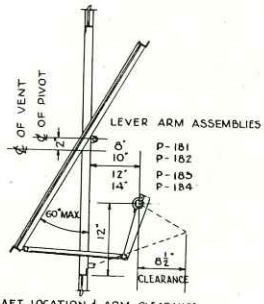
ALL UNITS VIEWED FROM THE INSIDE

TRUSCON OPERATORS FOR PIVOTED AND PROJECTED WINDOWS

LEVER ARM TYPE

Illustrated below is Truscon's Lever Arm operator with hand chain control. The torsion shaft with lever arms actuates one or more rows of horizontal pivoted ventilators. Vertical shaft with miter gear and hand wheel may be used instead of hand chain. The worm and gear in power is fully enclosed and runs in oil tight housing. This type of operator is the most economical for short runs or small groups of ventilators.

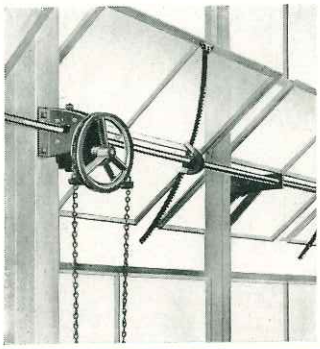


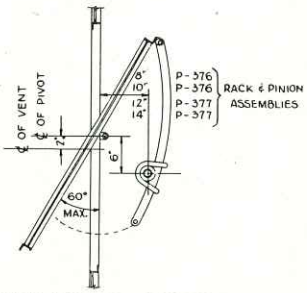


SHAFT LOCATION & ARM CLEARANCE FOR CENTER PIVOTED VENTS

RACK AND PINION TYPE

Rack and Pinion operators are practically the same as worm and gear, except that rack and pinion arms are used instead of lever arms, and the torsion shaft makes a number of complete revolutions. This type is preferable for use with projected and top pivoted ventilators or for long lines of horizontal pivoted ventilators. Either hand chain or vertical shaft with hand wheel control may be used or may be electrically operated.

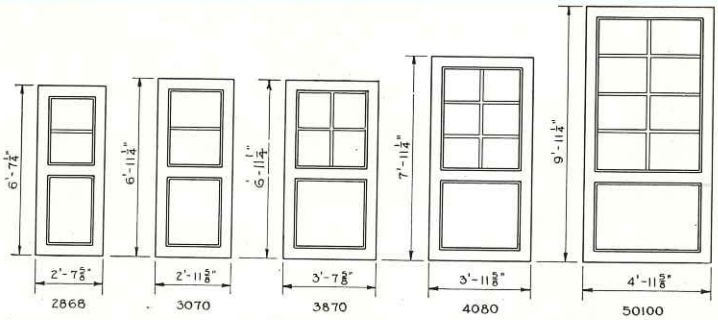




SHAFT LOCATION & RACK CLEARANCE FOR CENTER PIVOTED VENTS

TRUSCON INDUSTRIAL STEEL DOORS— SERIES 31

TYPES AND SIZES



NOTES

SIZES SHOWN ARE DOOR LEAF SIZES. SEE TABLE FOR DOOR OPENING AND MASONRY OPENING SIZES. DOORS NO. 2868, 3070, 3870 MAY HAVE MUNTINS OMITTED OR HAVE SOLID PANELS IN PLACE OF SASH PANELS. SOLID PANEL DOORS ARE NOT STOCKED. DOORS NO. 4080 & 50-100 ARE FURNISHED ONLY WITH SASH PANELS AS SHOWN.
SINGLE DOORS SHOWN ARE COMBINED TO MAKE DOUBLE DOORS.

DOOR NUMBER	DOOR SIZE		SWING DOOR OPENING DIM.		SWING DOOR *MASONRY OPG. DIM.		SLIDE DOOR OPENING DIM.		GLASS SIZE
	Width	Height	Width	Height	Width	Height	Width	Height	
Single Doors									
2868	2' 7 5/8"	6' 7 1/4"	2' 8"	6' 8"	3' 0 1/2"	6' 10 1/4"	....	....	21 3/8" x 16"
3070	2' 11 5/8"	6' 11 1/4"	3' 0"	7' 0"	3' 4 1/2"	7' 2 1/4"	2' 8"	6' 10"	25 3/8" x 18"
3870	3' 7 5/8"	6' 11 1/4"	3' 8"	7' 0"	4' 0 1/2"	7' 2 1/4"	....	....	16 3/8" x 18"
4080	3' 11 5/8"	7' 11 1/4"	4' 0"	8' 0"	4' 4 1/2"	8' 2 1/4"	3' 8"	7' 10"	18 3/8" x 15 7/8"
50-100	4' 11 5/8"	9' 11 1/4"	5' 0"	10' 0"	5' 4 1/2"	10' 2 1/4"	4' 8"	9' 10"	24 3/8" x 15 7/8"
Double Doors									
5468	5' 3 5/8"	6' 7 1/4"	5' 4"	6' 8"	5' 8 1/2"	6' 10 1/4"	....	....	21 3/8" x 16"
6070	5' 11 5/8"	6' 11 1/4"	6' 0"	7' 0"	6' 4 1/2"	7' 2 1/4"	5' 8"	6' 10"	25 3/8" x 18"
7470	7' 3 5/8"	6' 11 1/4"	7' 4"	7' 0"	7' 8 1/2"	7' 2 1/4"	....	....	16 3/8" x 18"
8080	7' 11 5/8"	7' 11 1/4"	8' 0"	8' 0"	8' 4 1/2"	8' 2 1/4"	7' 8"	7' 10"	18 3/8" x 15 7/8"
100-100	9' 11 5/8"	9' 11 1/4"	10' 0"	10' 0"	10' 4 1/2"	10' 2 1/4"	9' 8"	9' 10"	24 3/8" x 15 7/8"

* Masonry opening dimensions listed for swing doors are based upon the use of Truscon Standard pressed steel door frames.

TRUSCON INDUSTRIAL DOORS — SERIES 31

STANDARD DETAILS

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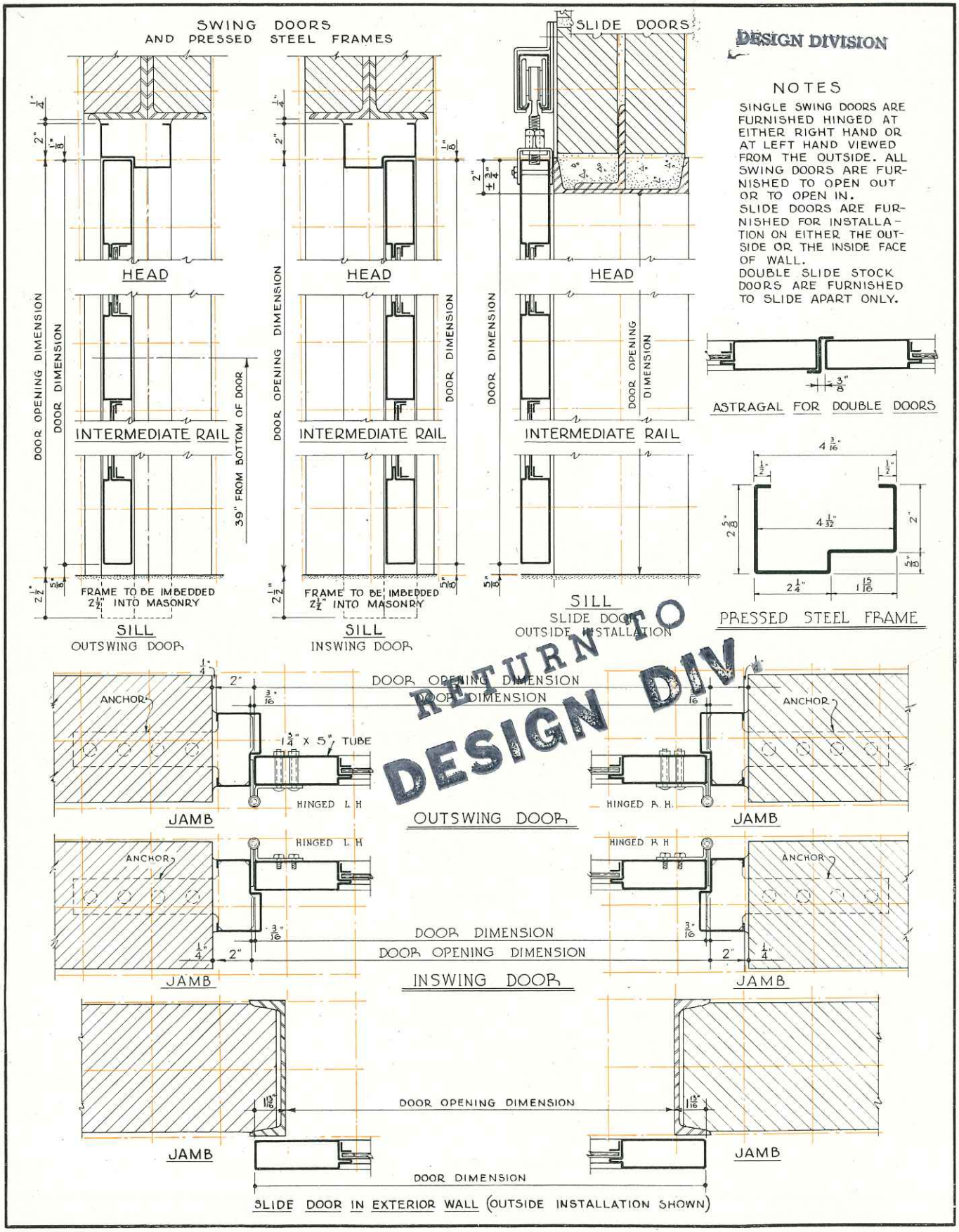

RETURN TO DESIGN DIV.